

The Undercount of Young Children in the Decennial Census

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Presentation to the Census Information Centers
Annual Training Conference
August 23, 2018

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What is the issue?

- In 2010, the estimated net undercount for children age 0 to 4 was 4.6%, or nearly 1 million young children
- The undercount of young children has been a persistent issue in the census, and recent trends suggest the problem is growing
- An undercount of children has implications for:
 - Political representation
 - Federal funding for programs such as:
 - Temporary Assistance for Needy Families
 - Special Education Grants
 - National School Lunch Program
 - School Planning

Previous Presentations to the CIC

- April 2016: SDC/CIC Annual Training Conference
- October 2016: CIC Steering Committee
- February 2018: SDC/CIC Steering Committee
- Today
 - Review the issue
 - Present results from our research this decade
 - Discuss activities and changes for the 2020 Census

Measuring Quality of the Census

- Census process indicators
 - Response rates, missing-data rates, costs, schedules
- Comparing census counts to estimates of the population size
 - Net census coverage = census count – estimate of population
 - If positive (>0), referred to as a net overcount
 - If negative (<0), net undercount
 - Two methods for estimating the population total
 - Post-Enumeration Survey (PES)
 - Demographic Analysis (DA)
 - DA believed to be more accurate for young children

Coverage in the 2010 Census

- In 2010, the total population count was very close to the DA estimate
 - Adults were overcounted while children we undercounted
 - Young children, age 0 to 4, had an especially high undercount of 4.6 percent or about 1 million young children

Age Group	Net Coverage
Total	0.1
Adults (age 18+)	0.7
Children (age 0 to 17)	-1.7
Young Children (age 0 to 4)	-4.6

A negative estimate denotes a net undercount

Source: 2010 Census and Demographic Analysis

Coverage in the 2010 Census

- The net coverage of young children varied by race and Hispanic origin

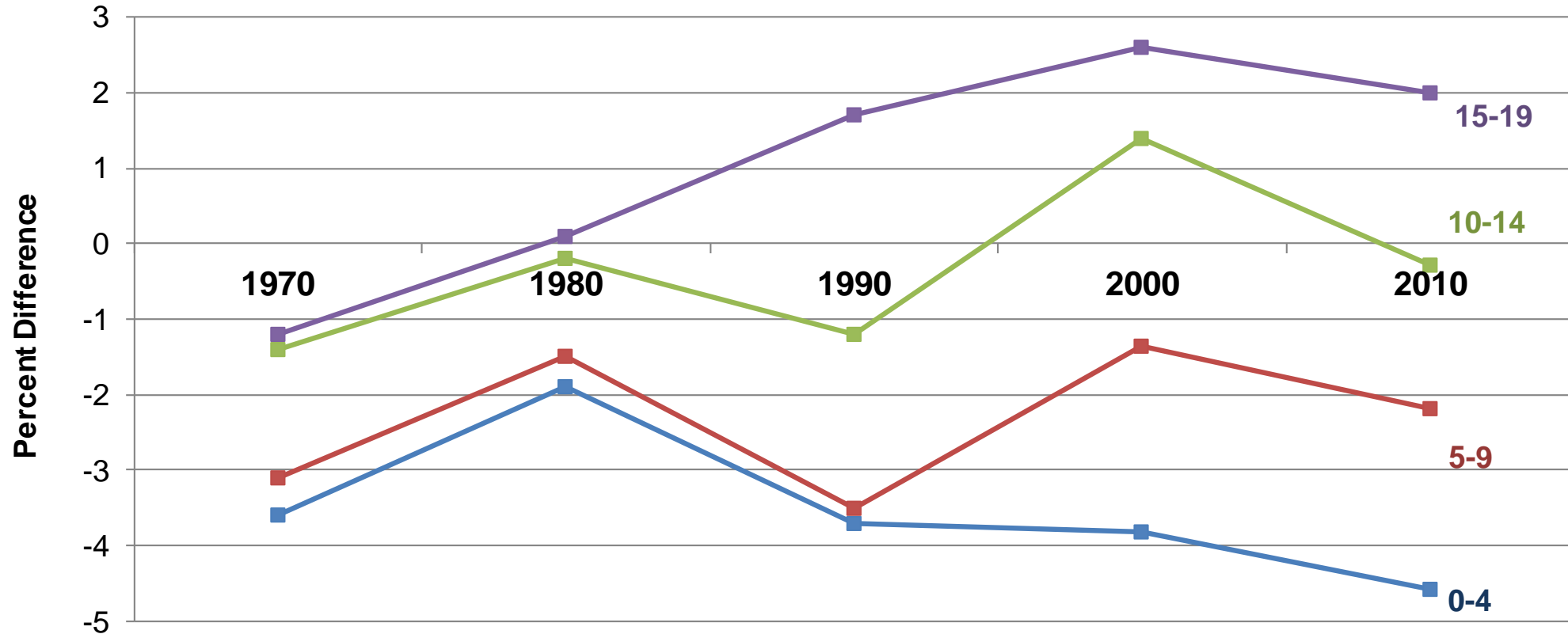
Race/Hispanic Origin	Net Coverage
Total	-4.6
Black alone-or-in-combination	-6.3
Not Black alone-or-in-combination	-4.2
Hispanic	-7.5
Non-Hispanic	-3.6

A negative estimate denotes a net undercount

Source: 2010 Census and Demographic Analysis

Coverage since 1970

- The net undercount of young children has increased in recent decades



Source: 1970, 1980, 1990, 2000, and 2010 Census and Demographic Analysis

Census Coverage in Other Countries

- The net undercount of young children is not unique to the United States

Country and Year	Net coverage Age 0-4
Australia 2011	-1.2
Canada 2011	-3.4
England and Wales 2011	-9.6
South Africa 2011	-15.1
Japan 2000	-2.3
South Korea 2000	-3.6

Source: O'Hare 2015

Census Bureau Work on this Issue

- 2013: Task Force on the Undercount of Young Children
 - Reviewed the issue and proposed new research
- 2015 to 2017: Research Team
 - Conducted research using existing data
 - Published results in the external 2020 Memo Series
 - Gave numerous briefings and presentations to census staff and external stakeholders
- 2017 to now: Implementation Team
 - Using research results to address this issue for the 2020 Census

Summary of Research on the Undercount of Young Children

Data Sources

- Existing data sources including:
 - 2010 Post-Enumeration Survey
 - Children who did not match to a census enumeration
 - 2010 Coverage Followup Operation
 - Children who were added to the census via this telephone operation
 - 2010 Census undercoverage probe
 - Respondents who indicated they may have not included a child

2. Were there any additional people staying here April 1, 2010 that you did not include in Question 1?
Mark ☒ all that apply.

- ☐ Children, such as newborn babies or foster children
- ☐ Relatives, such as adult children, cousins, or in-laws
- ☐ Nonrelatives, such as roommates or live-in baby sitters
- ☐ People staying here temporarily
- ☐ No additional people

Data Sources

- Limitations
 - These are existing data sources and were not collected for this specific purpose
 - The data provide evidence of potential coverage errors and show how the strength of that evidence differs by characteristics of children or households
 - The data DO NOT:
 - Tell us how many children with a certain characteristic were missed
 - Tell us why children missed
- Despite these limitations, our research has enhanced our understanding of the issue and possible causes of the undercount

Relationship to the Householder

- The 2010 Census asked how each person was related to the householder
- Less evidence of coverage error for biological and adopted children of the householder
- More evidence of coverage error for grandchildren, other relatives (e.g., niece/nephew), and children unrelated to the householder

2. How is this person related to Person 1? Mark ☒ ONE box.

- | | |
|---|--|
| <input type="checkbox"/> Husband or wife | <input type="checkbox"/> Parent-in-law |
| <input type="checkbox"/> Biological son or daughter | <input type="checkbox"/> Son-in-law or daughter-in-law |
| <input type="checkbox"/> Adopted son or daughter | <input type="checkbox"/> Other relative |
| <input type="checkbox"/> Stepson or stepdaughter | <input type="checkbox"/> Roomer or boarder |
| <input type="checkbox"/> Brother or sister | <input type="checkbox"/> Housemate or roommate |
| <input type="checkbox"/> Father or mother | <input type="checkbox"/> Unmarried partner |
| <input type="checkbox"/> Grandchild | <input type="checkbox"/> Other nonrelative |

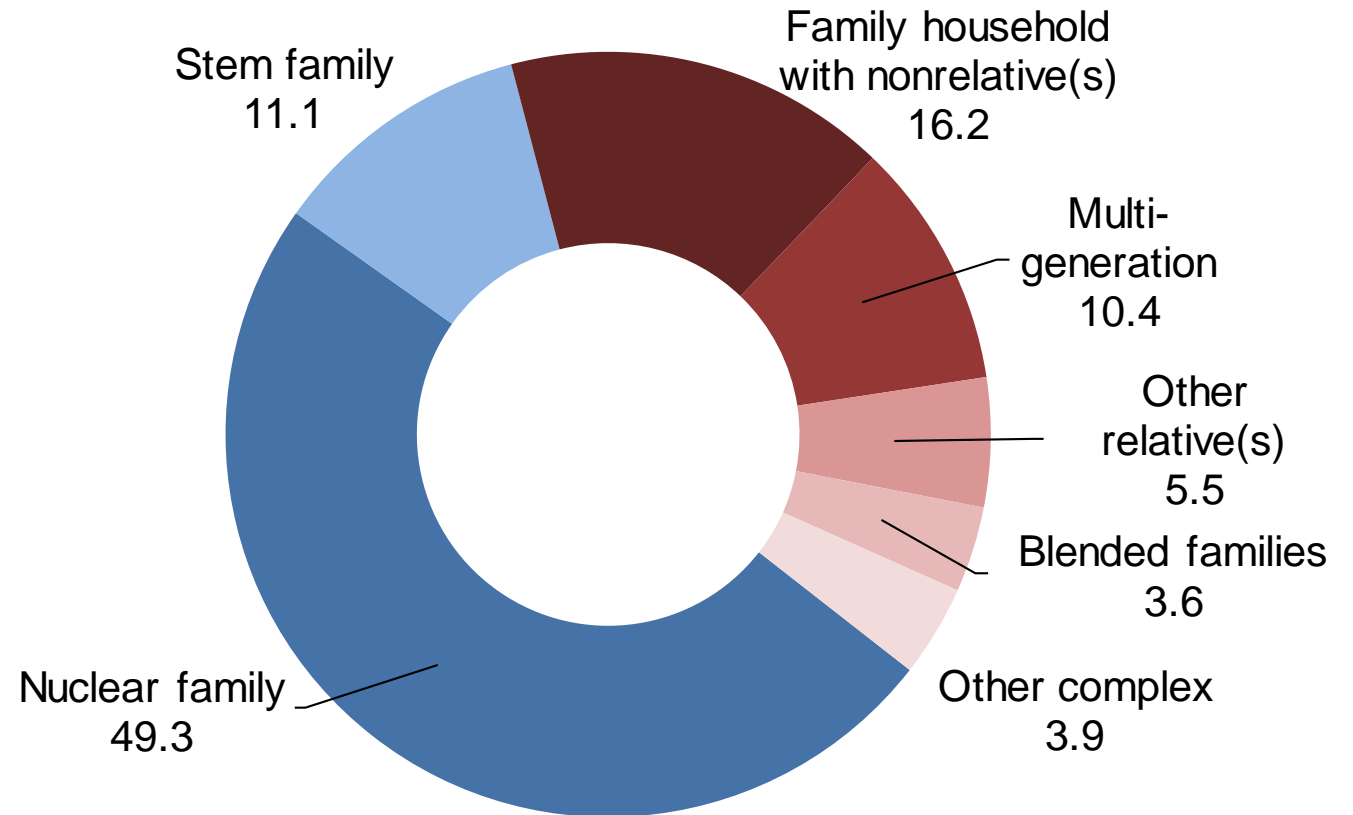
Complex Household Typology

- We classified households based on the types of relationships within the household
- Households that are complex in structure may be more difficult to enumerate accurately
- Complex households are defined as anything other than a nuclear family or single-parent family (stem family), such as:
 - Multi-generation households
 - Extended families
 - Multi-family households

Complex Household Typology

- In 2010, about 40% of young children lived in complex households
- More evidence of coverage error for children living in complex households

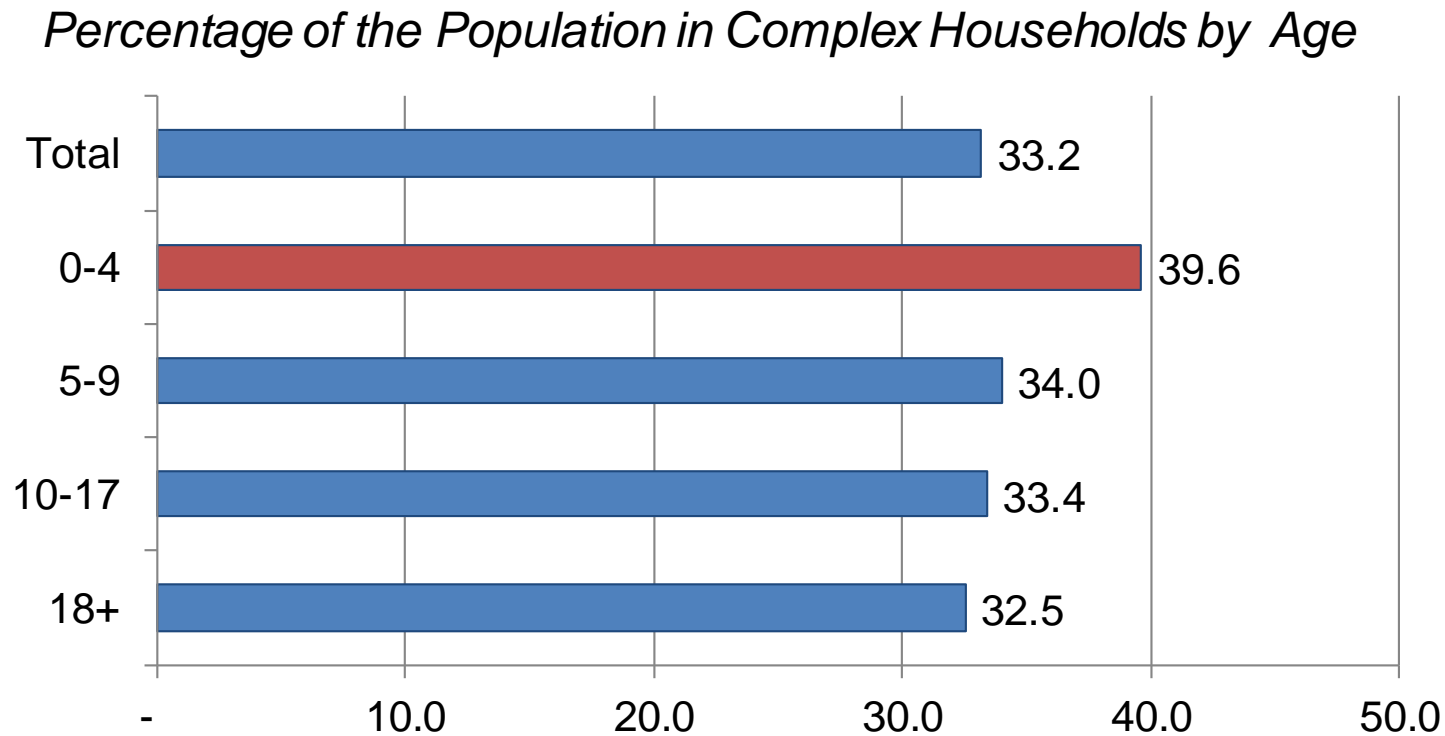
Percentage of Young Children by Household Type



Source: 2010 Census: special tabulation.

Complex Household Typology

- Young children were more likely to live in complex households than older children and adults

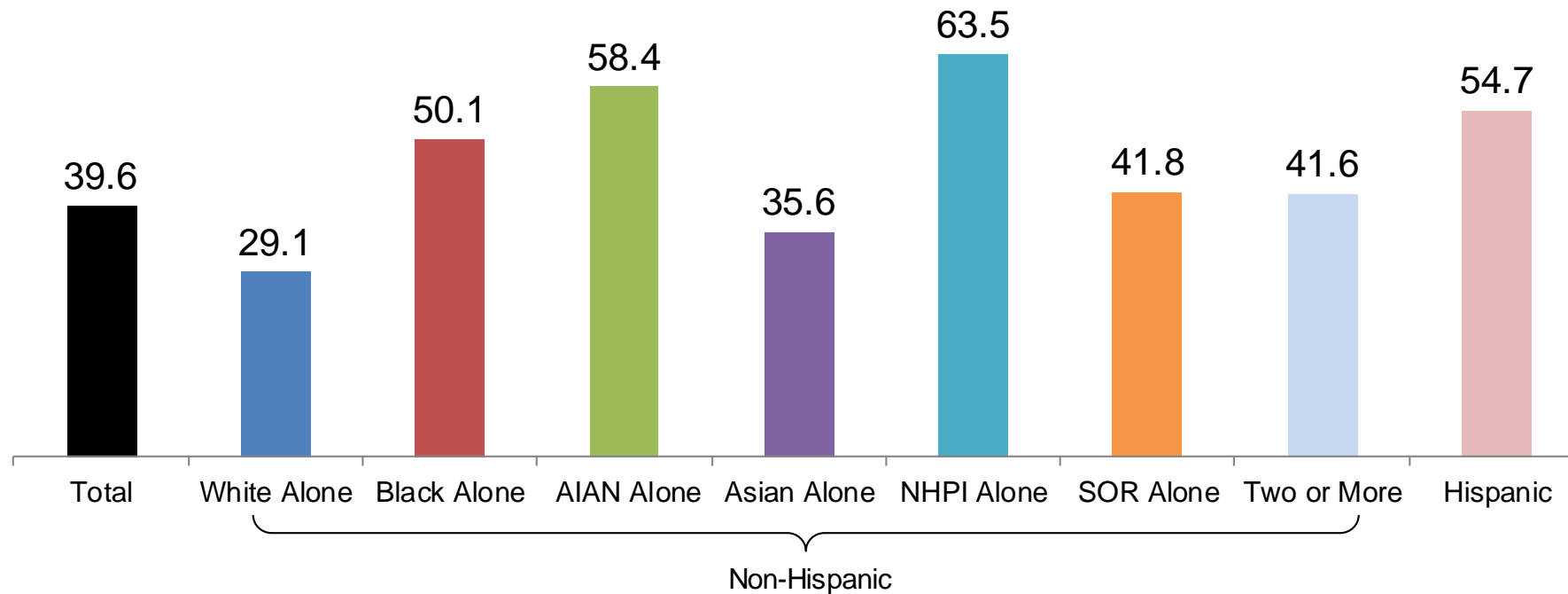


Source: 2010 Census: special tabulation.

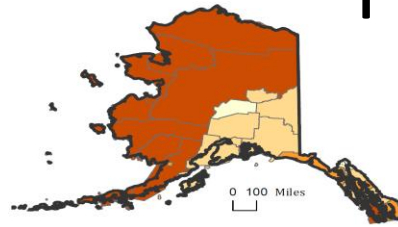
Complex Household Typology

- The percent of young children living in complex households differed by race and Hispanic Origin

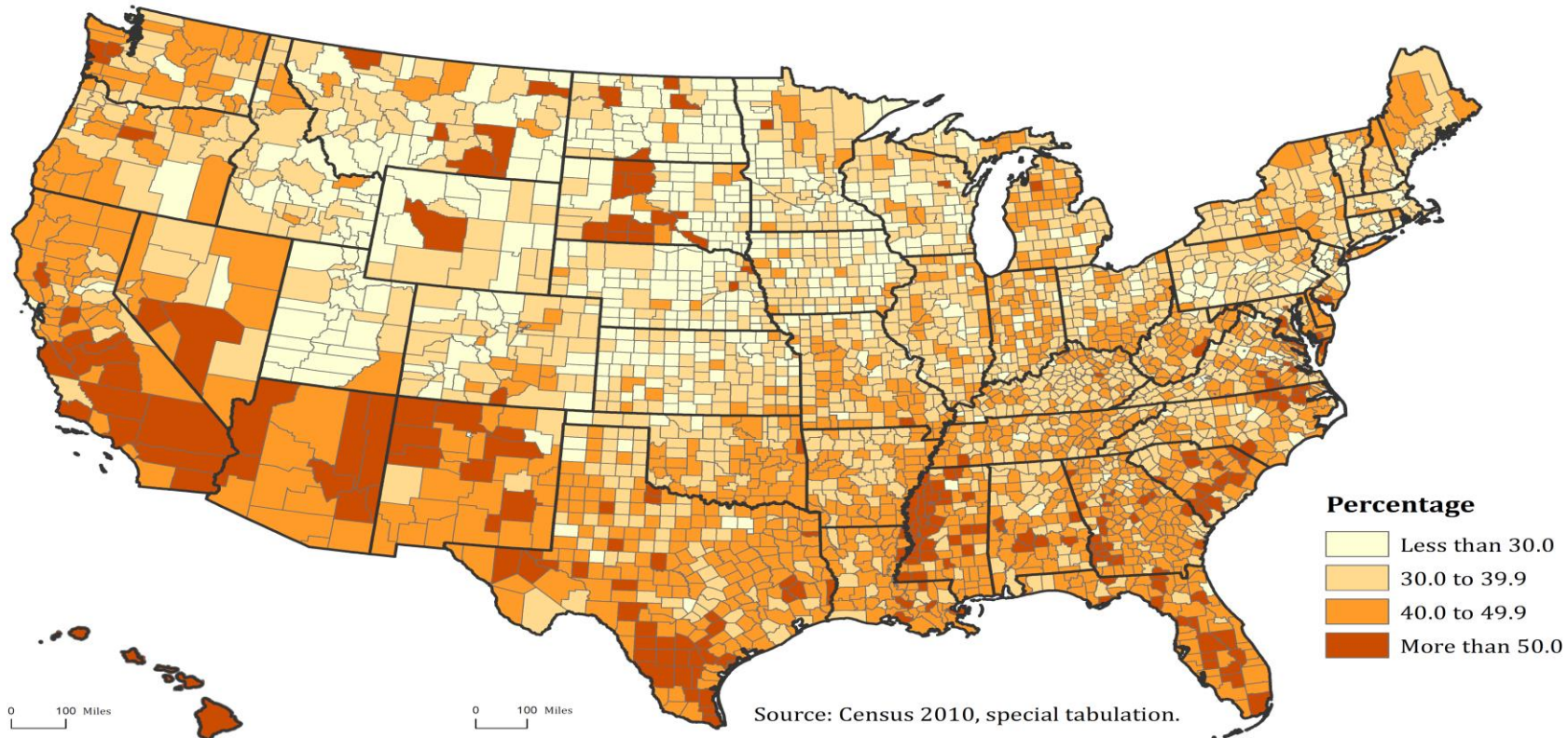
Percentage of the Young Children in Complex Households by Race and Hispanic Origin



Complex Household Typology



**Percentage of Young Children Living
in Complex Households by County: 2010**



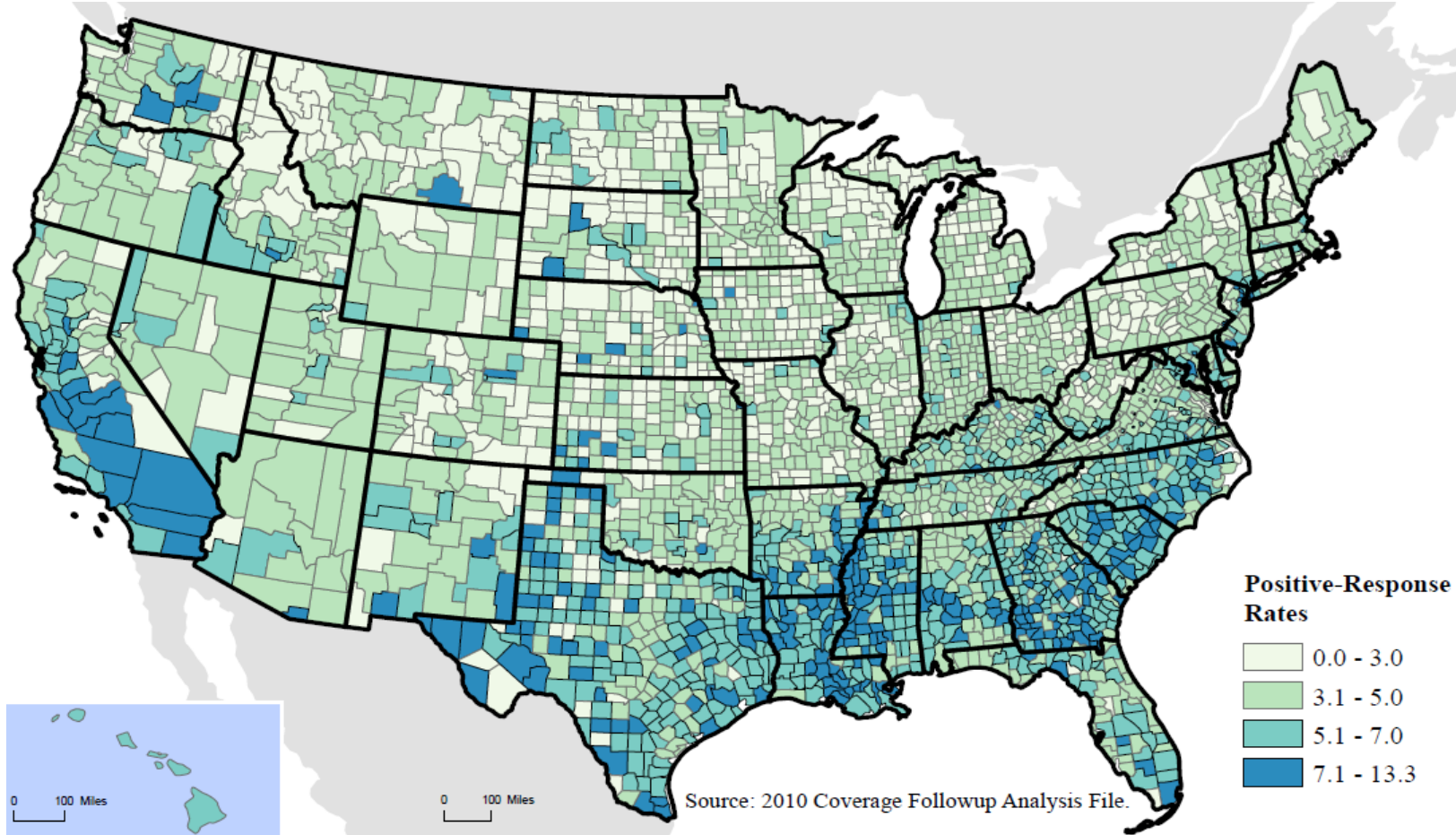
Source: Census 2010, special tabulation.

Geographic Indicators

- Until recently, we have not had subnational estimates of coverage for young children
- Our research examined the county-level rates of people responding to the undercount probe about young children
- Map on the next slide shows high rates for:
 - Southern states from the Carolinas through Texas
 - Bronx, Kings, and Queens Counties of New York City
 - Prince Georges and Baltimore Counties in Maryland
- Recent work by Census Bureau demographers to produce subnational Demographic Analysis estimates for young children show similar patterns

Geographic Indicators

County Level Positive-Response Rates to Child Undercount Probe



Coverage of Young Mothers

- Statistics Canada found that their census was more likely to miss young children if the child's mother was young
- We compared estimates of births from vital statistics by maternal age with ACS estimates of women giving birth by age
- Findings:
 - Young mothers (age 15 to 24) are undercounted in the ACS, and we think it is reasonable to believe this is true for the decennial census
 - Also reasonable to believe that young children are missed along with their young mother
 - This could corroborate findings for grandchildren and nonrelatives

Coverage of Young Mothers

- High undercoverage for teenage mothers
- Overcoverage of older mothers is likely due to response error in which respondent reports ever giving birth instead of just in the “past 12 months”

Estimated Coverage Error of New Mothers by Maternal Age

Maternal Age	Estimated Coverage Rate	Margin of Error
15 to 19 years	-27.3	2.4
20 to 24 years	-7.9	1.8
25 to 29 years	-1.7	1.7
30 to 34 years	6.2	1.8
35 to 39 years	20.3	2.5
40 to 50 years	136.6	7.8

Race and Hispanic Origin

- Demographic Analysis results for broad groups
 - Higher net undercount for Black vs. Non-Black young children
 - Higher net undercount for Hispanic vs. Non-Hispanic young children
- Our research also shows results by the more detailed groups, but we do not have net coverage rates for these groups
- Less evidence of coverage error for Non-Hispanic White children than other race and ethnicity groups

Very Young Children

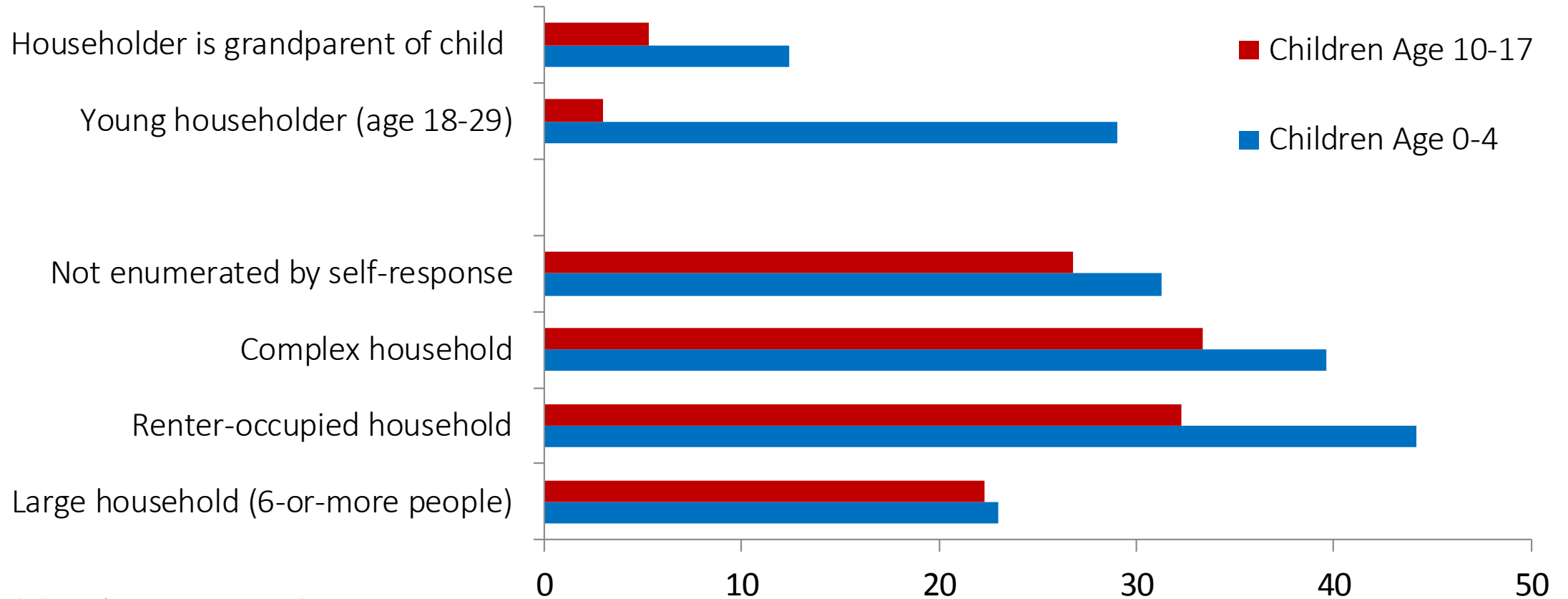
- Children born in the census year, January 1 to April 1, may be missed at an exceptionally high rate
- Demographic Analysis results show a smaller net undercount for age 0 than for age 1 and 2, but this is likely due to a number of children born after April 1 who are included in the census count
- The number of children with a given birth date decreases through March approaching April 1, suggesting that those born close to Census Day may be especially likely to be missed

Hard-to-Count Characteristics

- Young children are more likely than older children to have many hard-to-count characteristics
- These results help explain why the net undercount of young children is higher than older children
- We examined selected characteristics from the 2010 Census and the American Community Survey

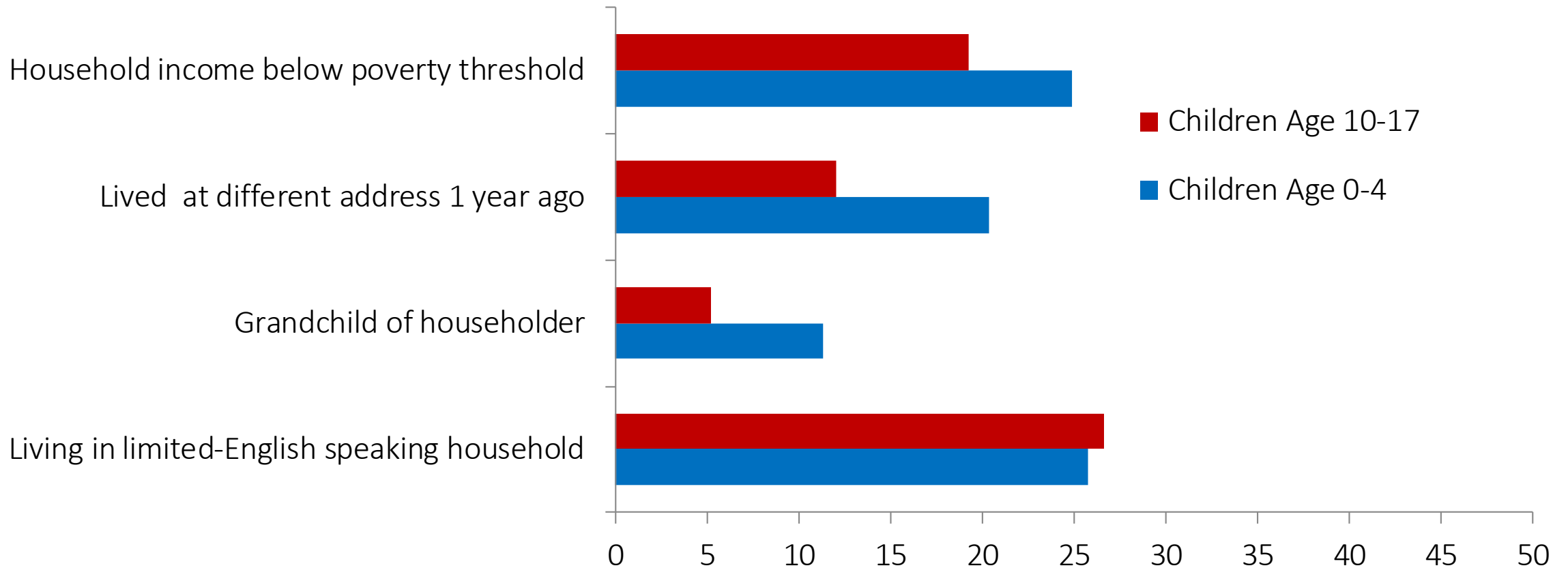
Hard-to-Count Characteristics

Characteristics of Children in the 2010 Census



Hard-to-Count Characteristics

Characteristics of Children in the American Community Survey



Updates and Activities for 2020

Clarifying Language About Who We Count

- Updated the language on the primary solicitation materials that most households will receive in 2020
 - “...all adults, children, and babies living or staying at this address”
instead of...
“...everyone living or staying at this address”
- Updated the help text on the internet self-response instrument to provide additional guidance about counting children

Clarifying Language About Who We Count

- Updated the wording of the undercount probe on the questionnaire to specifically mention “grandchildren” and “unrelated” children
- Automated instruments will allow respondents to add these people in real time

2010 Undercount Probe

2. Were there any additional people staying here April 1, 2010 that you did not include in Question 1?
Mark ☒ all that apply.

☐ Children, such as newborn babies or foster children

2018 Undercount Probe

2. Were there any additional people staying here on April 1, 2018 that you did not include in Question 1?
Mark ☒ all that apply.

☐ Children, related or unrelated, such as newborn babies, grandchildren, or foster children

Improved Enumerator Training

- Updated training for Nonresponse Followup enumerators
 - Specific mentions of counting children and knowledge check questions for on-line training
 - Case study for in-class training involving respondent who is confused about whether to count grandchild
- Updated training for Census Questionnaire Assistance (telephone) enumerators
- Included content and topics related to the undercount of young children in the Frequently Asked Questions available for field and telephone enumerators

Partnerships and Communications

- Focused partnership, communications, and outreach efforts on this issue
- Census Barriers, Attitudes, and Motivators Survey focus groups include questions about who respondents think should be counted in their household
- Census Innovation Workshops
- Continue work with communications team and Statistics in Schools programs
- Presentations to external groups such as the National Advisory Committee, Children's Leadership Council, State Data Centers and Census Information Centers
- Recent "Director's Blog" on this issue

Partnerships and Communications

- Preparing summary info-graphic that describes situations where children may be missed and suggests ways for partners to discuss these with the communities

Common situations where young children aren't counted	How can you help?
The child lives in a household that is large, multigenerational, or includes extended or multiple families.	<p>Spread the word that the census counts all people living or staying at an address, not just the person or family who owns or rents the property.</p> <p>Remind the person filling out the form to count all children including nonrelatives and children with no other place to live, even if they are only living at the address temporarily on April 1.</p>

Thank you!

Questions, comments, or ideas?

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